

Docket 61152-A/JPW/AJM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Saul J. Silverstein, et al.
Serial No. : 09/769,699
Filed : January 25, 2001
For : VZV GREF29p PROTEIN-RELATED COMPOSITIONS AND METHODS

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1185 Avenue of the Americas
New York, New York 10036
September 25, 2001

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

Applicants submit herewith an Information Disclosure Statement under 37 C.F.R. §1.56.

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants direct the Examiner's attention to the following disclosures:

1. Annunziato, P., O. Lungu, A. Gershon, D. Silvers, P. LaRussa, and S. Silverstein. 1996. In situ hybridization detection of varicella zoster virus in paraffin-embedded skin biopsy samples. Clin. Diagn. Virol. 7:69-76 (**Exhibit 1**).
2. Arvin, A. 1996. Varicella-zoster virus, p. 2547-2581. In B.N. Fields, D.M. Knipe, and P. M. Howley (ed.), Fields virology, 3rd ed., vol. 2. Lippincott-Raven Publishers, Philadelphia, Pa. (**Exhibit 2**).

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3. Asano, Y., N. Itakura, Y. Hiroishi, S. Hirose, T. Nagai, T. Ozaki, T. Yazaki, K. Yamanishi, and M. Takahashi. 1985. Viremia is present in incubation period in nonimmunocomprised children with varicella. *J. Pediatr.* 106: 69-71 (**Exhibit 3**).
4. Asculine, J.G., M. J. Levin, E. O. Major, B. Forghani, S. Straus, and J.M. Ostrove. 1990. Varicella-zoster virus infection of human astrocytes, Schwann cells, and neurons. *Virology* 172:834-843 (**Exhibit 4**).
5. Cohen, J., and S. Straus. 1996. Varicella-zoster virus and its replication, p. 2525-2546. In E. N. Fields, D.M. Knipe, and P.M. Howley (ed.), *Fields virology*, 3rd ed., vol. 1. Lippincott-Raven Publishers, Philadelphia, Pa. (**Exhibit 5**).
6. Cohrs, R.J., M. Barbour, and D. Gilden. 1996. Varicella-zoster virus (VZV) transcription during latency in human ganglia: detection of transcripts mapping to genes 21, 23, 42, and 63 in a cDNA library enriched for VZV RNA. *J. Virol.* 70:2789-2796 (**Exhibit 6**).
7. Cohrs, R.J., M.B. Barbour, R. Mahlingham, M. Wellish, and D. Gilden. 1995. Varicella-zoster virus (VZV) transcription during latency in human ganglia: prevalence of VZV gene 21 transcripts in latently infected human ganglia. *J. Virol.* 69:2674-2678 (**Exhibit 7**).

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8. Conns, R.J., K. Srock, M.B. Barbour, G. Owens, R. Mahlingham, M. Devlin, M. Wellish, and D. Gilden. 1994. Varicella-zoster virus (VZV) transcription during latency in human ganglia: construction of a cDNA library from latently infected human trigeminal ganglia and detection of a VZV transcript. J. Virol. 68:7900-7908 (**Exhibit 8**).
9. Croen, K.D., J.M. Ostrove, L.Y. Dragovic, and F.E. Straus. 1988. Patterns of gene expression and sites of latency in human ganglia are different for varicella-zoster and herpes simplex viruses. Proc. Natl. Acad. Sci. USA 85:9773-9777 (**Exhibit 9**).
10. Esiri, M., and A. Tomlinson. 1972. Herpes zoster: demonstration of virus in trigeminal nerve and ganglion by immunofluorescence and electron microscopy. J. Neurol. Sci. 15:45-48 (**Exhibit 10**).
11. Hope-Simpson, R.E. 1965. The nature of herpes zoster: a long term study and a new hypothesis. Proc. R. Soc. Med. 58:9-20 (**Exhibit 11**).
12. Kennedy, P., E. Grinfeld, and J. Gow. 1993. Latent varicella-zoster virus is located predominantly in neurons in human trigeminal ganglia. Proc. Natl. Acad. Sci. USA 90:4653-4657 (**Exhibit 12**).
13. Minchington, P., J. Houghland, A. Arvin, W. Ruyechan, and J. Hay. 1992. The varicella-zoster virus immediate-early protein IE63 is a major component of virus particles. J. Virol. 66:359-366 (**Exhibit 13**).

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14. Minchington, F.R., D. Bookey, and S.E. Turse. 1995. The transcriptional regulatory proteins encoded by varicella-zoster virus open reading frames (ORFs) 4 and 63, but not ORF 61, are associated with purified virus particles. *J. Virol.* 69:4274-4282 (**Exhibit 14**).
15. Minchington, F.R., P. Ling, M. Pensiero, E. Moss, W.T. Fuyechan, and J. Hay. 1990. The glycoprotein products of varicella-zoster virus gene 14 and their defective accumulation in a vaccine strain (Okazaki). *J. Virol.* 64:4540-4548 (**Exhibit 15**).
16. Koropchak, C., G. Graham, J. Palmer, M. Winsberg, S. Ting, M. Wallace, C. Prober, and A. Arvin. 1991. Investigation of varicella-zoster virus infection by polymerase chain reaction in the immunocompetent host with acute varicella. *J. Infect. Dis.* 163:1016-1022 (**Exhibit 16**).
17. Lungu, O., P. Annunziato, A. Gershon, S. Stegatis, D. Josefson, P. LaFussa, and S. Silverstein. 1995. Reactivated and latent varicella-zoster virus in human dorsal root ganglia. *Proc. Natl. Acad. Sci. USA* 92:10980-10984 (**Exhibit 17**).
18. Lungu, O., C. Panagiotidis, P. Annunziato, A. Gershon, and S. Silverstein. 1998. Aberrant intracellular localization of varicella-zoster virus regulatory proteins during latency. *Proc. Natl. Acad. Sci. USA* 95:7030-7035 (**Exhibit 18**).

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19. Mahalingam, F., M. Wellish, R. Cohrs, S. Debrus, J. Piette, E. Rentier, and D. Gilden. 1996. Expression of protein encoded by varicella-zoster virus open reading frame 63 in latently infected human ganglionic neurons. Proc. Natl. Acad. Sci. USA 93:2122-2124 (**Exhibit 19**).
20. Mairka, C., E. Fuss, H. Geiger, H. Hofelmayr, and M. Wolff. 1998. Characterization of viremia at different stages of varicella-zoster virus infection. J. Med. Virol. 58:91-98 (**Exhibit 20**).
21. Mazur, M.H., and R. Dolin. 1978. Herpes zoster at the NIH: a 20 year experience. Am. J. Med. 65:738-744 (**Exhibit 21**).
22. Meier, J. L., P. P. Holman, K. D. Green, J.E. Smialek, and S.E. Strauss. 1993. Varicella-zoster virus transcription in human trigeminal ganglia. Virology 193:193-200 (**Exhibit 22**).
23. Nikkels, A.F., P. Delvenne, S. Debrus, C. Sadzot-Delvaux, J. Piette, E. Rentier, and G. Fierard. 1995. Distribution of varicella-zoster virus gpI and gpII and corresponding genome sequences in the skin. J. Med. Virol. 46:91-96 (**Exhibit 23**).
24. Nikkels, A.F., E. Rentier, and G.E. Fierard. 1997. Chronic varicella-zoster virus skin lesions in patients with human immunodeficiency virus are related to decreased expression of gE and gB. J. Infect. Dis. 176:261-264 (**Exhibit 24**).

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25. Nikkels, A.F., S. Debrus, C. Sadzot-Delvaux, J. Piette, P. Delvanne, B. Rontier, and G.E. Pierard. 1993. Comparative immunohistochemical study of herpes simplex and varicella-zoster infections. *Virchows Arch. A* 422:121-126 (**Exhibit 25**).
26. Sadzot-Delvaux, C., M.-P. Merville-Louis, P. Delree, P. Marc, J. Piette, G. Moonen, and B. Rontier. 1990. An in vivo model of varicella-zoster virus latent infection of dorsal root ganglia. *J. Neurosci. Res.* 26:83-89 (**Exhibit 26**).
27. Sawyer, M.H., Y.N. Wu, C. J. Chamberlin, C. Burgos, S. K. Brodine, W. A. Bowler, A. LaRocco, E. C. Oldfield III, and M. P. Wallace. 1992. Detection of varicella-zoster virus DNA in the oropharynx and blood of patients with varicella. *J. Infect. Dis.* 166:335-338 (**Exhibit 27**).

Each of the above-listed references is listed on the accompanying PTO Form 1449 (**Exhibit A**).

Applicants request that the Examiner review the references and make them of record in the subject application.

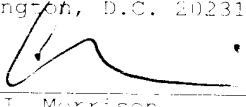
If a telephone conference would be of assistance in advancing the prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

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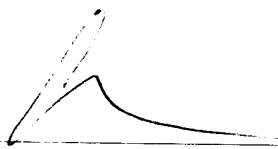
No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.


Alan J. Morrison
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7/2/01 Date


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